

REMARKS

Claims 1-8 are pending in the application.

Claims 1 and 4-8 have been amended in order to more particularly point out, and distinctly claim the subject matter to which the applicant regards as his invention. It is believed that this Amendment is fully responsive to the Office Action dated **January 29, 2003**.

Claim Rejections under 35 USC §112

Claims 1-4 and 7 are rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is amended, as needed, to overcome this rejection. Reconsideration and withdrawal of this rejection are respectfully requested.

The Examiner has indicated that lines 1-4 are claim 4 are indiscernible.

Claim 4 has been amended per suggestion in the outstanding Office Action. Reconsideration and withdrawal of this concern of in-discernability are respectfully requested.

Claim 7 recites the limitation “the positive polarity voltage and negative polarity voltage” in line 8. The Examiner indicates there is insufficient antecedent basis for this limitation in the claim.

Claim 7 has been amended, as needed, to overcome the lack of antecedent basis. Reconsideration and withdrawal of this concern of in-discernability are respectfully requested.

Claim Rejections under 35 USC §102

Claim 5 is rejected under 35 USC §102(e) as being anticipated by Preis.

In Preis, the voltage U2 output from the terminal b and the voltage U4 output from the terminal a are both produced from the output of the converter 2. In contrast, in the present invention of claim 5, the second voltage is generated by the fly-back circuit, but the first voltage is a voltage prior to being input to the fly-back circuit. That is, as different from Preis, the present invention has an advantage that the starting characteristic of the high-voltage circuit, i.e., fly-back circuit can be improved.

Reconsideration and withdrawal of this rejection are respectfully requested.

Claim Rejections under 35 USC §103

Claims 1-3 are rejected under 35 USC §103(a) as being unpatentable over Josephson in view of Deaver.

In rejecting the claimed invention, the outstanding Office Action has specifically stated that:

“Josephson is silent with regard to including means for short-circuiting the positive and negative terminals upon loss of source power.”

Applicant agrees with the Office assessed shortcoming of Josephson. In an attempt to overcome this Office assessed shortcoming, the outstanding Office Action has attempted to supplement this shortcoming with the balance of the same rejection.

However, it should be noted that independent claim 1 has specifically stated in relevant part that:

“a short circuit for short-circuiting substantially between said positive polarity voltage outputting terminal and said negative polarity voltage outputting terminal in response to a power-off signal”.

Therefore, it is clear from the language of the claim that a short circuit for short-circuiting substantially between said positive polarity voltage outputting terminal and said negative polarity voltage outputting terminal only occurs in response to a power-off signal. In the outstanding Office Action, there is no mentioning of a power-off signal. Naturally, there is also no mentioning of short-circuiting in response to a power-off signal.

Consequently, even if the asserted prior art are combined, exactly as suggested in the outstanding Office Action, the claimed invention will not result. It is respectfully submitted that independent claim 1 patentably distinguishes over the asserted prior art. All claims dependent thereon, by virtue of inherency, also patentably distinguish over the asserted prior art.

Reconsideration and withdrawal of this rejection are respectfully requested.

Claim 4 is rejected under 35 USC §103(a) as being unpatentable over Josephson in view of Deaver and further in view of Preis.

In rejecting the claimed invention, the outstanding Office Action has stated in relevant part that:

“Josephson is silent with regard to including a diode between the first and second positive polarity output terminals.”

The Applicant agrees with this Office assessed shortcoming of Josephson. As it has been mentioned in response to the rejection to claim 1, independent claim 1 has positively recited that a short-circuiting is performed in response to a power off signal. This feature is not asserted by the Office to be part of the disclosure or teaching of the relevant asserted prior art. Therefore, by virtue of inherency, all claims dependent thereon, including claim 4, are also patentably distinguished over the asserted prior art.

Reconsideration and withdrawal of this rejection are respectfully requested.

Claim 6 is rejected under 35 USC §103(a) as being unpatentable over Iwamoto in view of Sawanobori.

In rejecting the claimed invention, the outstanding Office Action has positively stated in relevant part that:

“Iwamoto is silent with regard to using the power supply circuit with a CCD imager.”

Applicant agrees with this Office assessed shortcoming of the asserted prior art. Independent claim 6 has been further amended to include a micro-computer and a power signal being provided

by the micro-computer. In the asserted prior art, Applicant cannot find any disclosure or teaching of a micro-computer. Naturally, there also cannot be found any disclosure or teaching of a micro-computer providing any power-off signal.

Therefore, independent claim 6, as amended, patentably distinguishes over the asserted prior art.

Reconsideration and withdrawal of this rejection are respectfully requested.

Claim 7 is rejected under 35 USC §103(a) as being unpatentable over Sawanobori in view of Josephson and further in view of Preis.

In rejecting the claimed invention, the outstanding Office Action has specifically stated in relevant part that:

“Sawanobori is silent with regard to the specifics of the operation of power supply 15. ... Josephson is silent with regard to including a diode between the first and second positive polarity output terminals.”

Applicant agrees with these Office assessed shortcomings of the asserted prior art.

In Preis, the voltage U2 output from the terminal b and the voltage U4 output from the terminal a are both produced from the output of the converter 2. In contrast, in the present invention of claim 5, the second voltage is generated by the fly-back circuit, but the first voltage is a voltage prior to being input to the fly-back circuit. That is, as different from Preis, the present invention has an advantage that the starting characteristic of the high-voltage circuit, i.e., fly-back circuit can be improved.

Therefore, independent claim 7, as amended, patentably distinguished over the asserted prior art.

Reconsideration and withdrawal of this rejection are respectfully requested.

Claim 8 is rejected under 35 USC §103(a) as being unpatentable over Josephson in view of Deaver and further in view of Preis.

In rejecting the claimed invention, the outstanding Office Action has specifically stated in relevant part that:

“Josephson is silent with regard to including means for short-circuiting the positive and negative terminals upon loss of power source. ... Josephson is silent with regard to including a diode between the first and second positive polarity output terminals.”

In Preis, the voltage U2 output from the terminal b and the voltage U4 output from the terminal a are both produced from the output of the converter 2. In contrast, in the present invention of claim 5, the second voltage is generated by the fly-back circuit, but the first voltage is a voltage prior to being input to the fly-back circuit. That is, as different from Preis, the present invention has an advantage that the starting characteristic of the high-voltage circuit, i.e., fly-back circuit can be improved.

Therefore, independent claim 8, as amended, patentably distinguished over the asserted prior art.

Reconsideration and withdrawal of this rejection are respectfully requested.

Conclusion

In view of the aforementioned amendments and accompanying remarks, claims 1 and 4-8, as amended, are in condition for allowance, which action, at an early date, is requested.

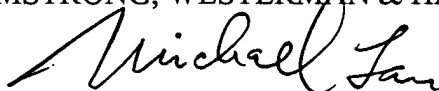
If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicant's undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "**Version with markings to show changes made.**"

In the event that this paper is not timely filed, Applicant respectfully petitions for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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PATENT TRADEMARK OFFICE

Enclosures: Version with markings to show changes made

IN THE CLAIMS:

Please amend claims 1 and 4-8 as follows:

1. (Thrice Amended) A power supply circuit, comprising:

a first circuit for generating a positive polarity voltage, said first circuit including a rectifying circuit and a capacitor;

a positive polarity voltage outputting terminal for outputting the positive polarity voltage from said first circuit;

a second circuit for generating a negative polarity voltage;

a negative polarity voltage outputting terminal for outputting the negative polarity voltage from said second circuit;

a ground terminal for providing a reference potential for both of said positive polarity voltage and said negative polarity voltage; and

a short circuit for short-circuiting substantially between said positive polarity voltage outputting terminal and said negative polarity voltage outputting terminal in response to a power-off signal;

wherein residual charges of the [capacitors] capacitor pass said short circuit in turning a power off; and.

wherein said first circuit includes a chopper circuit for generating a low first positive voltage.

4.(Twice Amended) A power supply circuit according to claim 1, wherein said first circuit includes a chopper circuit for generating a low first positive voltage, and a fly-back circuit for receiving the first positive voltage from the chopper circuit to generate a high second positive voltage,

said positive polarity voltage outputting terminal includes first and second output terminals for respectively outputting the first positive voltage and the second positive voltage, and further comprising:

a diode connected between said first and second output terminals in a forward direction from said first output terminal to said second output terminal.

5. (Amended) A power supply circuit, comprising:

a chopper circuit for generating a low first voltage;

a fly-back circuit for receiving the first voltage from said chopper circuit to generate a high second voltage;

first and second terminals for respectively outputting the first and second voltages as power outputs of the power supply circuit; and

a diode connected between said first terminal and said second terminal in a forward direction [of] from said first terminal to said second terminal.

6. (Amended) A camera, comprising:

a micro-computer;

a first circuit for generating a positive polarity voltage;
a first terminal for outputting the positive polarity voltage from said first circuit;
a second circuit for generating a negative polarity voltage;
a second terminal for outputting the negative polarity voltage from said second circuit;
a short circuit for short-circuiting substantially between said first terminal and said second terminal in response to a power-off signal from said micro-computer; and
a CCD imager for receiving the positive polarity voltage and negative polarity voltage through said first terminal and said second terminal.

7. (Twice Amended) A camera, comprising:

a chopper circuit for generating a low first voltage;
a fly-back circuit for receiving the first voltage from said chopper circuit to generate a high second voltage;
first and second terminals for respectively outputting the first voltage as a positive polarity voltage and the second [voltages] voltage as a negative polarity voltage;
a diode connected between said first terminal and said second terminal in a forward direction from said first terminal to said second terminal; and
a CCD imager for receiving the positive polarity voltage and negative polarity voltage through said first terminal and said second terminal.

8. (Amended) A power supply circuit, comprising:
a first circuit for generating a positive polarity voltage;
a first terminal for outputting the positive polarity voltage from said first circuit;
a second circuit for generating a negative polarity voltage;
a second terminal for outputting the negative polarity voltage from said second circuit;
and a short circuit for short-circuiting substantially between said first terminal and said second terminal in response to a power-off signal;

wherein said first circuit includes a chopper circuit for generating a low first positive voltage, and a fly-back circuit for receiving the first positive voltage from the chopper circuit to generate a high second positive voltage, and further comprising:

first and second output terminals for respectively outputting the first positive voltage and the second positive voltage as outputs of the power supply circuit; and

a diode connected between said first and second output terminals in a forward direction of from said first positive voltage output terminal to said second positive voltage output terminal.